

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A circuit for detecting an electric current comprising:

a current transformer;

a buffer;

a diode configured ~~constructed~~ to detect a peak value of an input current ~~using a diode having, the diode comprising~~ an anode connected to a secondary winding of the current transformer at an input side of the circuit and a cathode connected to the buffer at an output side of the circuit;

[[and]] a capacitor having one end connected to the cathode of the diode and the other end ~~being grounded~~ connected to a ground potential and configured to output a detected peak value of the input current via the buffer at the secondary winding of the current transformer; and

~~wherein the circuit further comprises~~ a zener diode ~~having~~ connected between the diode and the buffer, said zener diode comprising a cathode connected to both the cathode of the diode and an input terminal of the buffer, and an anode ~~being grounded~~ connected to a ground potential.

2. (Canceled)

3. (Currently Amended) A circuit for detecting an electric current comprising:
- a current transformer;
 - a buffer;
 - a diode configured ~~constructed~~ to detect a peak value of an input current
~~diode having,~~ the diode comprising an anode connected to a secondary winding
of the current transformer at an input side of the circuit and a cathode connected
to the buffer at an output side of the circuit;
 - [[and]] a capacitor having one end connected to the cathode of the diode
and the other end ~~being grounded~~ connected to a ground potential and
configured to output a detected peak value of the input current via the buffer at
the secondary winding of the current transformer;
 - ~~wherein the circuit further comprises:~~ a zener diode having connected
between the diode and the buffer, said zener diode comprising a cathode
connected to both the cathode of the diode and an input terminal of the buffer
and an anode ~~being grounded~~ connected to a ground potential; and
 - a shunt resistor having one end connected to both the cathode of the
diode and the input terminal of the buffer and the other end ~~being grounded~~
connected to a ground potential.